

WE CLAIM:

1. A method for real time search, said method comprising the steps of :
 - receiving a client query from a client system, said client query regards a content of at least one information packet;
 - matching at least a portion of said client query against at least a portion of a plurality of extracted terms to generate a query result, said extracted terms being extracted out of a plurality of information packets, said information packets either provided by a plurality of information sources or representative of a portion of a received signal provided from a plurality of information sources, said extracted terms are stored in a storage means, said storage means is configured to allow fast insertion and fast deletion of content;
 - providing a query result to the client system.
2. The method of claim 1 wherein storage means further stores information representative of a reception of extracted terms.
3. The method of claim 2 wherein the storage means further allows timely deletions of irrelevant or time-decayed terms and query-terms.
4. The method of claim 2 wherein the storage means is a term index data structure.
5. The method of claim 2 wherein the step of matching is preceded by at least one preprocessing step selected from a group consisting of :
 - adding control data to said information packets;
 - filtering the plurality of information packets;
 - processing said extracted terms by adding control information to said extracted terms;
 - filtering the extracted terms to generate filtered extracted terms. and

storing an extracted term in a term index data structure.

6. The method of claim 5 wherein the control data comprising of information packet identification, information source identification and time of arrival.
7. The method of claim 2 wherein the extracted terms are extracted out of the plurality of information packets by parsing and stemming the plurality of information packets; and wherein the step of filtering further comprising a step selected from a group consisting of : (a) discarding said terms constructed of one-letter words; (b) discarding said terms constructed of frequently used words; (c) discarding said terms constructed of stop-words; and (d) discarding said terms constructed of predefined words.
8. The method of claim 2 wherein a reception of an information packet is followed by the steps of :
 - storing information packet with an associated packet identifier in the storage means, storing extracted term information representative of a reception of at least one extracted term at the storage means, said at least one extracted terms extracted from the information packet; and
 - linking between the stored information packet and the extracted term information.
9. The method of claim 8 wherein a deletion of an information packet is followed by a step of deleting the linked extracted term information.
10. The method of claim 8 wherein the information packet are stored in a messages hash, and wherein the linked extracted term information is stored in a terms hash.
11. The method of claim 10 wherein the extracted term information comprising of at least one information field selected from a group consisting of:

a last modification time field, indicating a most recent time of reception of the extracted term, during a predetermine period of time;

a number of channels containing term, indicating a number of information sources that provided the extracted term during a predetermine period of time;

a total instances field, indicating a total amount of receptions of the extracted term during a predetermine period of time; and

a terms inverted entries map, comprising of a plurality of terms inverted file entries, each entry holding information representative of a reception of the extracted term from a single information source during a predetermine period of time.

12. The method of claim 11 wherein each inverted file entry comprising of at least one field selected from a group consisting of :

a channel identifier, for identifying the information source that provided the extracted term during a predetermine period of time;

instances number, for indicating a total amount of receptions of the extracted term from an information source during a predetermine period of time; and

time of last appearance, for indicating a most recent time of reception of the extracted term from an information source during a predetermine period of time.

13. The method of step 10 wherein each information packet is further associated to a message terms key map, said message key map comprising of a plurality of message characteristic entries, each message characteristic entry associated to an extracted term being extracted from the information packet, said message characteristic entry comprising of at least one of the following fields selected from a group consisting of :

a term inverted file, for pointing to the term extracted information;

an instance of number, for indicating a number of time said extracted term appeared in the information packet; and

an inverted file entry, for pointing to a terms inverted file entry.

14. The method of claim 1 wherein the step of matching is preceded by the steps of:
inserting an extracted term into a terms hash table and into a terms inverted file;
inserting an information source identification, said information source provided the extracted term, to a terms inverted entry map table in said terms inverted file;
inserting information packet data in a messages hash table;
inserting the extracted term from said information packet to a messages data table;
increasing a value of instances in said messages data table by one; and
updating a value of information source identification in said message data table.
15. The method of claim 14 further comprising at least one additional step selected from a group consisting of the steps of :
increasing a value of total instances in said terms inverted file;
updating a value of last modification time in said terms inverted file;
increasing a value of instances number in said inverted entry map table associated with said information source identification in said terms inverted file; and
updating a value of message time in said messages data table.
16. The method of claim 3 wherein the step of deleting further comprising of the steps of :
receiving an information packet identification, whereas the terms extracted from the information packets are to be deleted;
reading the information packet identification from the messages hash table in said terms index data structure;
obtaining relevant entries of said extracted terms belonging to said information packet in said messages data; and
accessing said terms inverted file for each said terms entry pointed to said terms inverted file.

17. The method of claim 16 wherein the step of deleting further comprising a step of decreasing a value of said total instances by a value of said instances number for each said terms entry pointed to said terms inverted file.
18. The method of step 3 wherein the step of deleting further comprising a step of deleting an extracted term by a garbage collection process and canceling a link between said term in said terms hash table and said terms inverted file.
19. The method of claim 1 further comprising a step of storing alert criteria; and wherein the step of matching further comprising a step of matching alert criteria received and processed in the past against newly received terms to generate an alert.
20. The method of claim 1 further comprising a step of matching the client query against historical archives of informational content to generate an archive query result.
21. The method of claim 20 wherein the step of matching the client query against the historical archives of informational content is followed by a step of processing the archive query result and a result of the step of matching at least a portion of said client query against at least a portion of a plurality of extracted terms to generate the query result.
22. The method of claim 1 further comprising a step of matching the client query against a semi-static database of said informational content and having a low incidence of changing to generate a semi static query result.
23. The method of claim 22 wherein the step of matching the client query against the semi-static database is followed by a step of processing the semi static query result and a result of the step of matching at least a portion of said client query against at least a portion of a plurality of extracted terms to generate the query result.

24. The method of step 1 wherein the step of matching further comprises a step of ranking information sources according to a similarity between at least a portion of information packets provided by said information sources and between the client query.
25. The method of claim 24 wherein the step of ranking is followed by a step of creating a list of ranked information sources, said list forms a part of the query result.
26. The method of claim 24 wherein the step of ranking is based upon a parameter selected from a group consisting of :
- a total amount of extracted terms provided by an information source in a predefined time interval;
- an elapsed time since the extracted term was provided by the information source in said predefined time interval; and
- an extracted term position in the information source.
27. The method of claim 1 wherein an information source is selected from a group consisting of : data network providers, chat channels providers, news providers, and music providers.
28. The method of claim 1 wherein information packets comprise of content selected from a group of : text, audio, video, multimedia, and executable code streaming media.
29. The method of claim 1 wherein the step of matching further involves a step of computing a similarity between a client query and a group of at least one information packet.
30. The method of claim 30 wherein the group of at least one information packet comprising of at least one information packet received from a single information source.

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31. The method of claim 29 wherein the similarity reflects at least one parameter selected from a group consisting of :

a total amounts of extracted terms being received from at least one information source during a predefined time interval;

a number of relevant extracted terms being received from at least one information source during the predefined time interval;

a total number of information sources being searched during the predefined time interval;

an elapsed time since a last appearance of a relevant extracted term from an information source during the predefined time interval;

a position of relevant extracted terms in at least one information source; extracted term in proximity to a relevant extracted term;

a part of speech of a relevant extracted term; and

a relevant extracted term frequency and importance in a language of the information source.

32. The method of claim 1 wherein the step of matching implements a matching technique selected from a group consisting of :

boolean based matching;

probabilistic matching;

fuzzy matching;

proximity matching; and

vector based matching.

33. The method of claim 1 wherein the step of matching implements complex matching techniques.

34. In a computing environment running on a computer platform utilized as a central server system, a method of real-time search for live dynamic content is operating in order to

make available the capability for users of client systems connectable thereto of selection of a plurality of information sources coupled to the central server system by sending client queries regarding the informational content of said information sources, the method comprising of the steps of:

receiving a client query, said client query regards a content of at least one information packet;

matching at least a portion of said client query against at least a portion of a plurality of extracted terms to generate a query result, said extracted terms being extracted out of a plurality of information packets, an information packet either provided by an information sources or representative of a portion of a received signal provided from an information source, said extracted terms are stored in a storage means, said storage means configured to allow fast insertion and fast deletion of content; and

providing a query result.

35. The method of claim 34 wherein storage means further stores information representative of a reception of extracted terms.

36. The method of claim 35 wherein the fast update storage means further allows timely deletions of irrelevant or time-decayed terms and query-terms.

37. The method of claim 35 wherein the storage means is a term index data structure.

38. The method of claim 34 wherein the step of matching is preceded by at least one preprocessing step selected from a group consisting of :

adding control data to said information packets;

filtering the plurality of information packets;

processing said extracted terms by adding control information to said extracted terms;

filtering the extracted terms to generate filtered extracted terms. and

storing an extracted term in a term index data structure.

39. The method of claim 35 wherein the extracted terms are extracted out of the plurality of information packets by parsing and stemming the plurality of information packets; and wherein the step of filtering further comprising a step selected from a group consisting of : (a) discarding said terms constructed of one-letter words; (b) discarding said terms constructed of frequently used words; (c) discarding said terms constructed of stop-words; and (d) discarding said terms constructed of predefined words.
40. The method of claim 38 wherein the control data comprising of information packet identification, information source identification and time of arrival.
41. The method of claim 35 wherein a reception of an information packet is followed by the steps of :
- storing information packet with an associated packet identifier and storing extracted term information representative of a reception of at least one extracted term, said at least one extracted terms extracted from the information packet; and
- linking between the stored information packet and the extracted term information.
42. The method of claim 41 wherein a deletion of an information packet is followed by a step of deleting the linked extracted term information.
43. The method of claim 41 wherein the information packet are stored in a messages hash, and wherein the linked extracted term information is stored in a terms hash.
44. The method of claim 42 wherein the extracted term information comprising of at least one information field selected from a group consisting of:
- a last modification time field, indicating a most recent time of reception of the extracted term, during a predetermine period of time;
- a number of channels containing term, indicating a number of information

sources that provided the extracted term during a predetermine period of time; a total instances field, indicating a total amount of receptions of the extracted term during a predetermine period of time; and a terms inverted entries map, comprising of a plurality of terms inverted file entries, each entry holding information representative of a reception of the extracted term from a single information source during a predetermine period of time.

45. The method of claim 44 wherein each inverted file entry comprising of at least one field selected from a group consisting of :

a channel identifier, for identifying the information source that provided the extracted term during a predetermine period of time;

instances number, for indicating a total amount of receptions of the extracted term from an information source during a predetermine period of time; and

time of last appearance, for indicating a most recent time of reception of the extracted term from an information source during a predetermine period of time.

46. The method of step 44 wherein each information packet is further associated to a message terms key map, said message key map comprising of a plurality of message characteristic entries, each message characteristic entry associated to an extracted term being extracted from the information packet, said message characteristic entry comprising of at least one of the following fields selected from a group consisting of :

a term inverted file, for pointing to the term extracted information;

an instance of number, for indicating a number of time said extracted term appeared in the information packet; and

an inverted file entry, for pointing to a terms inverted file entry.

47. The method of claim 35 wherein the step of matching is preceded by the steps of: inserting an extracted term into a terms hash table and into a terms inverted file;

inserting an information source identification, said information source provided the extracted term, to a terms inverted entry map table in said terms inverted file;

inserting information packet data in a messages hash table;

inserting the extracted term from said information packet to a messages data table;

increasing a value of instances in said messages data table by one; and

updating a value of information source identification in said message data table.

48. The method of claim 47 further comprising at least one additional step selected from a group consisting of the steps of :

increasing a value of total instances in said terms inverted file;

updating a value of last modification time in said terms inverted file;

increasing a value of instances number in said inverted entry map table associated with said information source identification in said terms inverted file; and

updating a value of message time in said messages data table.

49. The method of claim 36 wherein the step of deleting further comprises of the steps of :

receiving an information packet identification, whereas the terms extracted from the information packets are to be deleted;

reading the information packet identification from the messages hash table in said terms index data structure;

obtaining relevant entries of said extracted terms belonging to said information packet in said messages data; and

accessing said terms inverted file for each said terms entry pointed to said terms inverted file.

50. The method of claim 49 wherein the step of deleting further comprising a step of decreasing a value of said total instances by a value of said instances number for each said terms entry pointed to said terms inverted file.

51. The method of step 36 wherein the step of deleting further comprising a step of deleting an extracted term by a garbage collection process and canceling a link between said term in said terms hash table and said terms inverted file.
52. The method of claim 35 further comprising a step of storing alert criteria; and wherein the step of matching further comprising a step of matching alert criteria received and processed in the past against newly received terms to generate an alert.
53. The method of claim 35 further comprising a step of matching the client query against historical archives of informational content to generate an archive query result.
54. The method of claim 53 wherein the step of matching the client query against the historical archives of informational content is followed by a step of processing the archive query result and a result of the step of matching at least a portion of said client query against at least a portion of a plurality of extracted terms to generate the query result.
55. The method of claim 35 further comprising a step of matching the client query against a semi-static database of said informational content and having a low incidence of changing to generate a semi static query result.
56. The method of claim 55 wherein the step of matching the client query against the semi-static database is followed by a step of processing the semi static query result and a result of the step of matching at least a portion of said client query against at least a portion of a plurality of extracted terms to generate the query result.
57. The method of step 35 wherein the step of matching further comprises a step of ranking information sources according to a similarity between at least a portion of information packets provided by said information sources and between the client query.

58. The method of claim 57 wherein the step of ranking is followed by a step of creating a list of ranked information sources, said list forms a part of the query result.

59. The method of claim 58 wherein the step of ranking is based upon a parameter selected from a group consisting of :

a total amount of extracted terms provided by an information source in a predefined time interval;

an elapsed time since the extracted term was provided by the information source in said predefined time interval; and

an extracted term position in the information source.

60. The method of claim 35 wherein an information source is selected from a group consisting of: data network providers, chat channels providers, news providers, and music providers.

61. The method of claim 35 wherein information packets comprise of content selected from a group of: text, audio, video, multimedia, and executable code streaming media.

62. The method of claim 35 wherein the step of matching further involves a step of computing a similarity between a client query and a group of at least one information packet.

63. The method of claim 62 wherein the group of at least one information packet comprising of at least one information packet received from a single information source.

64. The method of claim 62 wherein the similarity reflects at least one of the following parameters :

a total amounts of extracted terms being received from at least one information source during a predefined time interval;

a number of relevant extracted terms being received from at least one information source during the predefined time interval;

a total number of information sources being searched during the predefined time interval;

an elapsed time since a last appearance of a relevant extracted term from an information source during the predefined time interval;

a position of relevant extracted terms in at least one information source; extracted term in proximity to a relevant extracted term;

a part of speech of a relevant extracted term; and

a relevant extracted term frequency and importance in a language of the information source.

65. The method of claim 35 wherein the step of matching implements a matching technique selected from a group consisting of :

boolean based matching;

probabilistic matching;

fuzzy matching;

proximity matching; and

vector based matching.

66. The method of claim 35 wherein the step of matching implements complex matching techniques.

67. A method for real time search, said method comprising the steps of :

receiving an information packet; said information packets either provided by an information source or representative of a portion of a received signal provided by an information sources

storing the information packet and related control data in a storage means, said storage means is configured to allow fast insertion and fast deletion of content;

extracting at least one extracted term out of the information packet;
storing extracted term information representative of a reception of the at least one extracted term in the storage means;
linking between the stored information packet and the extracted term information;
receiving a client query, said client query regards a content of at least one information packet;
matching at least a portion of said client query against at least a portion of a content of the storage means to generate a query result;
providing a query result.

68. The method of claim 67 wherein the storage means is a term index data structure.
69. The method of claim 67 wherein the step of matching is preceded by at least one preprocessing step selected from a group consisting of :
adding control data to said information packets;
filtering the plurality of information packets;
processing said extracted terms by adding control information to said extracted terms;
filtering the extracted terms to generate filtered extracted terms. and
storing an extracted term in a term index data structure.
70. The method of claim 67 wherein an extracted term is extracted out of an information packets by parsing and stemming the information packet; and
wherein the step of filtering further comprising a step selected from a group consisting of : (a) discarding said terms constructed of one-letter words; (b) discarding said terms constructed of frequently used words; (c) discarding said terms constructed of stop-words; and (d) discarding said terms constructed of predefined words.
71. The method of claim 70 wherein the control data comprising of information packet identification, information source identification and time of arrival.

72. The method of claim 67 wherein a receiving an information packet is followed by the steps of :

storing information packet with an associated packet identifier in an information packet storage means, storing extracted term information representative of a reception of at least one extracted term, said at least one extracted terms extracted from the information packet; and

linking between the stored information packet and the extracted term information.

73. The method of claim 67 wherein a deletion of an information packet is followed by a step of deleting the linked extracted term information.

74. The method of claim 71 wherein the information packet are stored in a messages hash, and wherein the linked extracted term information is stored in a terms hash.

75. The method of claim 74 wherein the extracted term information comprising of at least one information field selected from a group consisting of:

a last modification time field, indicating a most recent time of reception of the extracted term, during a predetermine period of time;

a number of channels containing term, indicating a number of information sources that provided the extracted term during a predetermine period of time;

a total instances field, indicating a total amount of receptions of the extracted term during a predetermine period of time; and

a terms inverted entries map, comprising of a plurality of terms inverted file entries, each entry holding information representative of a reception of the extracted term from a single information source during a predetermine period of time.

76. The method of claim 75 wherein each inverted file entry comprising of at least one field selected from a group consisting of :

a channel identifier, for identifying the information source that provided the extracted term during a predetermine period of time;

instances number, for indicating a total amount of receptions of the extracted term from an information source during a predetermine period of time; and

time of last appearance, for indicating a most recent time of reception of the extracted term from an information source during a predetermine period of time.

77. The method of step 76 wherein each information packet is further associated to a message terms key map, said message key map comprising of a plurality of message characteristic entries, each message characteristic entry associated to an extracted term being extracted from the information packet, said message characteristic entry comprising of at least one of the following fields selected from a group consisting of :

a term inverted file, for pointing to the term extracted information;

an instance of number, for indicating a number of time said extracted term appeared in the information packet; and

an inverted file entry, for pointing to a terms inverted file entry.

78. The method of claim 67 wherein the step of matching is preceded by the steps of:

inserting an extracted term into a terms hash table and into a terms inverted file;

inserting an information source identification, said information source provided the extracted term, to a terms inverted entry map table in said terms inverted file;

inserting information packet data in a messages hash table;

inserting the extracted term from said information packet to a messages data table;

increasing a value of instances in said messages data table by one; and

updating a value of information source identification in said message data table.

79. The method of claim 78 further comprising at least one additional step selected from a group consisting of the steps of :

increasing a value of total instances in said terms inverted file;
updating a value of last modification time in said terms inverted file;
increasing a value of instances number in said inverted entry map table associated with said information source identification in said terms inverted file; and
updating a value of message time in said messages data table.

80. The method of claim 67 wherein the step of deleting further comprises of the steps of :
receiving an information packet identification, whereas the terms extracted from the information packets are to be deleted;
reading the information packet identification from the messages hash table in said terms index data structure;
obtaining relevant entries of said extracted terms belonging to said information packet in said messages data; and
accessing said terms inverted file for each said terms entry pointed to said terms inverted file.

81. The method of claim 80 wherein the step of deleting further comprising a step of decreasing a value of said total instances by a value of said instances number for each said terms entry pointed to said terms inverted file.

82. The method of step 67 wherein the step of deleting further comprising a step of deleting an extracted term by a garbage collection process and canceling a link between said term in said terms hash table and said terms inverted file.

83. The method fo claim 67 further comprising a step of storing alert criteria; and wherein the step of matching further comprising a step of matching alert criteria received and processed in the past against newly received terms to generate an alert.

84. The method of claim 67 further comprising a step of matching the client query against historical archives of informational content to generate an archive query result.

85. The method of claim 84 wherein the step of matching the client query against the historical archives of informational content is followed by a step of processing the archive query result and a result of the step of matching at least a portion of said client query against at least a portion of a plurality of extracted terms to generate the query result.

86. The method of claim 67 further comprising a step of matching the client query against a semi-static database of said informational content and having a low incidence of changing to generate a semi static query result.

87. The method of claim 86 wherein the step of matching the client query against the semi-static database is followed by a step of processing the semi static query result and a result of the step of matching at least a portion of said client query against at least a portion of a plurality of extracted terms to generate the query result.

88. The method of step 67 wherein the step of matching further comprises a step of ranking information sources according to a similarity between at least a portion of information packets provided by said information sources and between the client query.

89. The method of claim 88 wherein the step of ranking is followed by a step of creating a list of ranked information sources, said list forms a part of the query result.

90. The method of claim 89 wherein the step of ranking is based upon a parameter out of a group consisting of :

a total amount of extracted terms provided by an information source in a predefined time interval;

an elapsed time since the extracted term was provided by the information source in said predefined time interval; and

an extracted term position in the information source.

91. The method of claim 67 wherein an information source is selected from a group consisting of : data network providers, chat channels providers, news providers, and music providers.

92. The method of claim 67 wherein information packets comprise of content selected from a group of : text, audio, video, multimedia, and executable code streaming media.

93. The method of claim 67 wherein the step of matching further involves a step of computing a similarity between a client query and a group of at least one information packet.

94. The method of claim 93 wherein the group of at least one information packet comprising of at least one information packet received from a single information source.

95. The method of claim 93 wherein the similarity reflects at least one of the following parameters :

a total amounts of extracted terms being received from at least one information source during a predefined time interval;

a number of relevant extracted terms being received from at least one information source during the predefined time interval;

a total number of information sources being searched during the predefined time interval;

an elapsed time since a last appearance of a relevant extracted term from an information source during the predefined time interval;

a position of relevant extracted terms in at least one information source;

extracted term in proximity to a relevant extracted term;
a part of speech of a relevant extracted term; and
a relevant extracted term frequency and importance in a language of the information source.

96. The method of claim 67 wherein the step of matching implements a matching technique selected from a group consisting of :

boolean based matching;
probabilistic matching;
fuzzy matching;
proximity matching; and
vector based matching.

97. The method of claim 67 wherein the step of matching implements complex matching techniques.

98. A system for real time search, the system is adapted to receive a client query originated by a client system, to receive a plurality of information packets provided by a plurality of information sources or representative of portion of a signal provided by the plurality of information sources, to generate query results to be provided to the client system, the system for real time search comprising:

an information packet processor, for receiving an information packet and for processing the information packet to generate at least one processed portion of the information packet;
a storage means, coupled to the information packet processor and to a storage means, for temporarily storing information representative of a reception of the at least one processed portion of the information packet, the storage means are configured to allow fast insertion and fast deletion of content; and
a query and result manager, coupled to the storage means, for matching a

received client query against at least portion of a content of the storage means to generate a query result.

99. The system of claim 98 wherein the at least one processed portion of the information packet is an at least one extracted term.

100. The system of claim 98 further comprising at least one module selected from a group of modules consisting of :

- a message coordinator module adapted to coordinate an handling of a plurality of information packets;
- a message buffer adapted to hold temporarily the plurality of information packets;
- a message filter module for filtering the plurality of information packets according to predefined rules;
- a term extractor module for performing parsing and stemming on said plurality of information packets;
- a terms filter for excluding extracted terms according to predefined rules;
- a queries coordinator module to coordinate the processing of client queries;
- a query-term extractor to parse and stem incoming queries in order to extract and process operative query-terms;
- a query-terms filter for excluding specific query-terms in a predefined manner;
- an archive search module for indexing data on said archive files containing historical informational content and for returning results according to said indexed data;
- a semi-static database search module to act on a semi-static database holding semi-static information source control data;
- a future search module for matching extracted terms from the plurality of information packets against static queries; and
- a queries index for holding queries for a predefined time frame to provide means of future search.

101. The system of claim 98 wherein the storage means is a term index data structure.
102. The system of claim 101 wherein the term index data structure is adapted to hold indexed extracted terms and information packet identifiers.
103. The system of claim 102 wherein the term index data structure further comprising:
- a terms hash table to hold extracted, filtered and processed terms;
 - a terms inverted file pointed to by said term hash table holding a terms inverted entry map;
 - a messages hash table to hold information packets identification;
 - a messages data table to hold information packets data; and
 - a channel map to hold a list of information sources and the related number of index terms of said information source.
104. The system of claim 103 wherein the terms inverted file further comprising:
- a terms inverted entries map table;
 - a total instances of said term;
 - a number of information sources containing said term; and
 - a last modification time of said term.
105. The system of claim 104 further comprising :
- a message terms keyed map;
 - an information source identification; and
 - an information packet time of arrival.
106. The system of claim 105 wherein the message terms keyed map further comprising:
- a pointer to said terms inverted file;
 - an instances number of said term in said information packet; and
 - a pointer to said inverted file entry related to said term.

107. The system of claim 106 wherein the terms inverted entries map further comprising;
- an information source identification;
 - an instances number of said term in said information source informational content;
- and
- a time of last appearance of said term in said information source informational content.
108. The system of claim 98 wherein said high update storage means allows fast insertion and deletion of content.
109. The system of claim 98 wherein the fast update storage means further allows timely deletions of irrelevant or time-decayed terms and query-terms.
110. The system of claim 98 further comprising of at least one of the following means :
- adding means for adding control data to said information packets;
 - filtering means for the plurality of information packets;
 - processing means for said extracted terms by adding control information to said extracted terms; and
 - term filtering means for the extracted terms to generate filtered extracted terms.
111. The system of claim 98 wherein the extracted terms are extracted out of the plurality of information packets by parsing and stemming the plurality of information packets; and
- wherein the term filtering means are adapted to (a) discarding said terms constructed of one-letter words; (b) discarding said terms constructed of frequently used words; (c) discarding said terms constructed of stop-words; and (d) discarding said terms constructed of predefined words.

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112. The system of claim 110 wherein the control data comprising of information packet identification, information source identification and time of arrival.
113. The system of claim 98 further adapted to receive an information packet, to storing information packet with an associated packet identifier in an information packet storage means, store extracted term information representative of a reception of at least one extracted term, said at least one extracted terms extracted from the information packet; and to link between the stored information packet and the extracted term information.
114. The system of claim 113 further adapted to delete an information packet and delete the linked extracted term information.
115. The system of claim 113 wherein information packet are stored in a messages hash, and wherein the linked extracted term information is stored in a terms hash.
116. The system of claim 115 wherein the extracted term information comprising of at least one information field selected from a group consisting of:
- a last modification time field, indicating a most recent time in which the extracted term was received;
 - a number of channels containing term, indicating a number of information sources that provided the extracted term;
 - a total instances field, indicating a number of times the extracted term was provided; and
 - a terms inverted entries map, comprising of a plurality of terms inverted file entries, each entry holding information representative of a reception of the extracted term from a single information source.
117. The system of claim 126 wherein each inverted file entry comprising of at least one field selected from a group consisting of :

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a channel identifier, for identifying the information source that provided the extracted term;

instances number, for indicating a number of times the extracted term was provided by an information source; and

time of last appearance, for indicating a most recent time in which the extracted term was received from an information source.

118. The system of step 117 wherein each information packet is further associated to a message terms key map, said message key map comprising of a plurality of message characteristic entries, each message characteristic entry associated to an extracted term being extracted from the information packet, said message characteristic entry comprising of at least one of the following fields selected from a group consisting of :

a term inverted file, for pointing to the term extracted information;

an instance of number, for indicating a number of time said extracted term appeared in the information packet; and

an inverted file entry, for pointing to a terms inverted file entry.

119. The system of claim 98 further adapted to insert an extracted term into a terms hash table and into a terms inverted file, insert an information source identification, said information source provided the extracted term, to a terms inverted entry map table in said terms inverted file, insert information packet data in a messages hash table; insert the extracted term from said information packet to a messages data table; increase a value of instances in said messages data table by one; and update a value of information source identification in said message data table.

120. The system of claim 119 further adapted to extract an extracted term and accordingly to perform at least one operation selected from a group consisting of :

increase a value of total instances in said terms inverted file;

update a value of last modification time in said terms inverted file;

increase a value of instances number in said inverted entry map table associated with said information source identification in said terms inverted file; and
update a value of message time in said messages data table.

121. The system of claim 98 further adapted to delete an information packet, and accordingly to perform at least one operation selected from a group consisting of :
- receive an information packet identification, whereas the terms extracted from the information packets are to be deleted;
 - read the information packet identification from the messages hash table in said terms index data structure;
 - obtain relevant entries of said extracted terms belonging to said information packet in said messages data; and
 - access said terms inverted file for each said terms entry pointed to said terms inverted file.

122. The system fo claim 98 further adapted to store alert criteria and to match alert criteria received and processed in the past against newly received terms to generate an alert.
123. The system of claim 98 further adapted to match the client query against historical archives of informational content to generate an archive query result.
124. The system of claim 123 wherein the system further adapted to generate a query result from an archive query result and from a recent query result.
125. The system of claim 98 further adapted to match the client query against a semi-static database of said informational content and having a low incidence of changing to generate a semi static query result.

126. The system of claim 125 wherein the system further adapted to generate a query result from a semi static query result and from a recent query result.

127. The system of step 98 further adapted to rank information sources according to a similarity between at least a portion of information packets provided by said information sources and between the client query.

128. The system of claim 127 further adapted to insert a list of ranked information sources in the query result.

129. The system of claim 128 wherein the step of ranking is based upon a parameter out of a group consisting of : a total amount of extracted terms provided by an information source in a predefined time interval; an elapsed time since the extracted term was provided by the information source in said predefined time interval; and an extracted term position in the information source.

130. The system of claim 98 wherein an information source is selected from a group consisting of : television broadcast providers; radio broadcast providers; data network providers, chat channels providers, news providers, and music providers.

131. The system of claim 98 wherein information packets comprise of content selected from a group of : text, audio, video, multimedia, and executable code streaming media.

132. The system of claim 98 further adapted to compute a similarity between a client query and a group of at least one information packet.

133. The system of claim 138 wherein the group of at least one information packet comprising of at least one information packet received from a single information source.

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134. The system of claim 138 wherein the similarity reflects at least one of the following parameters :

- a total amounts of extracted terms being received from at least one information source during a predefined time interval;
- a number of relevant extracted terms being received from at least one information source during the predefined time interval;
- a total number of information sources being searched during the predefined time interval;
- an elapsed time since a last appearance of a relevant extracted term from an information source during the predefined time interval;
- a position of relevant extracted terms in at least one information source;
- extracted term in proximity to a relevant extracted term;
- a part of speech of a relevant extracted term; and
- a relevant extracted term frequency and importance in a language of the information source.

135. The system of claim 98 adapted to implement a matching technique selected from a group consisting of :

- boolean based matching;
- probabilistic matching;
- fuzzy matching;
- proximity matching; and
- vector based matching.

136. The system of claim 98 adapted to implements complex matching techniques.